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ABSTRACT

Following 4 weeks of unsuccessful conventional therapy, five trainable mentally retarded males (CA 7-12 years) were placed in a behavior modification group-therapy-readiness program (BMP). Immediate gratification, short range delayed gratification, and long range delayed gratification were used. Teachers were encouraged to continue the BMP in their classrooms. Desirable behavior was exhibited significantly more often (p less than .005) during the BMP than before. There was no significant difference between the BMP sessions and followup sessions. Extinction was avoided through the use of varied reinforcement schedules and cooperation of the teachers. Operant techniques successfully readied mental retardates for a group therapy setting. (Author)

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Following 4 weeks of unsuccessful conventional therapy, five trainable mentally retarded males were placed in a behavior modification 'group-therapy-readiness' program (BMP). Immediate gratification, short range delayed gratification and long range delayed gratification were used. Teachers were encouraged to continue the BMP in their classrooms. Desirable behavior was exhibited significantly more often ($p < .005$) during the BMP than before. There was no significant difference between the BMP sessions and follow-up sessions. Extinction was avoided through the use of varied reinforcement schedules and cooperation of the teachers. Operant techniques successfully readied mental retardates for a group therapy setting.

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Group therapy readiness using operant techniques with mental retardates

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Five mentally retarded males (CA 7-11 to 12-3) were placed in a group psychotherapy setting in a southeastern mental retardation center. The subjects were referred to therapy with the hopes of fostering group socialization through cooperative play. After four weeks of 'conventional' therapy, and four sessions of gathering baseline data, it was apparent that the subjects were not ready for a group therapy setting. It was agreed upon that the subjects should be placed in a behavior modification 'group-therapy-readiness' program. The literature was reviewed to ascertain the most appropriate program development.

Redd and Birnbrauer (1969) used food and praise on a fixed interval basis with ten retarded children. They concluded that reinforcers dispensed contingent upon play behavior acquired "discriminative properties". However, behavior did not change in the presence of the noncontingent reinforcing adult.

Sherman and Baer (1969) demonstrated that positive reinforcement is frequently used to replace undesirable behavior with more appropriate behavior. Burchard (1967) described a systematic program utilizing operant conditioning

techniques to socialize antisocial retardates. Through the use of positive reinforcement and punishment "gross antisocial behavior" was controlled and replaced by practical behaviors. Removal from the living quarters and M&Ms were used as aversive and positive reinforcement respectively, to eliminate attention seeking behavior with a retarded child (Weisen and Watson, 1967).

Whitman, Mercurio and Caponigri (1970) trained two severely retarded boys to become socially interactive. Results indicated a gradual increase in social interaction as training progressed and that response generalization to children not included in the training procedures occurred. After reinforcement was terminated, rapid extinction followed. Arzin and Lindsley (1956) reported that operant techniques "can be used to develop, maintain and eliminate cooperation between children with the use of specific instructions concerning cooperation (p. 102)". The procedures were subject to extinction and spontaneous recovery.

Willoughby (1969), using time-out procedures, felt that "if an external stimulus is selectively associated with nonreinforcement, then the response rate can be shown to decrease in the presence of that stimulus (p. 299)". The author demonstrated through two experimental procedures that time-out must be followed by a second unpunished behavior to be maximally effective.

Hetherington, Rose and Pick, (1964) tested severely retarded (n=96), moderately retarded (n=80) and normal

children (n=80) and reported that all groups learned better with immediate reinforcement than delayed reinforcement. Sprague and Toppe (1966) noted that a low active group of retardates learned significantly better than a high active group ($p < .05$).

Behavior modification techniques were used on a group basis with seven mentally retarded boys described as displaying severe "attentional" problems with disruptive behavior (Zimmerman, Zimmerman and Russell, 1969). They concluded that token reinforcement "can be successfully applied to the problem of altering behavior of individuals treated as a group in a group setting (p. 112)". Musick and Luskey (1970) reported on the effectiveness of a token economy with moderately and severely retarded children. Inappropriate behavior and hypochondriacal complaints, frequent prior to implementation of the program, decreased noticeably.

Following an extensive review of the literature, Nawas and Braun (1970) listed eleven conditions applicable to behavior modification therapy. They are in brief:

1) stimulus should be as intense as possible.

2) reinforcement should follow immediately.

3) response required should be as simple as possible.

4) all circumstances associated with the behavior should be attended to.

5) motivation should be high.

6) frequency of reinforcement should be as high as possible.

7) positive reinforcement is more effective in a "pleasant" atmosphere.

8) extended punishment should be avoided.

9) in punishment, escape should be impossible.

10) inconsistency must be avoided.

11) do not reinforce inappropriate behavior with attention.

METHOD

Five mentally retarded males were referred to two therapists (one male and one female) for group psychotherapy. After the initial four weeks of therapy (two sessions per week) which netted highly inappropriate, self abusive and destructive behavior, a behavior modification program (BMP) was instituted to facilitate general readiness for the group therapy setting.

Four specific behaviors were targeted as being conducive to the needs of the group functioning. Each member of the group received one star per target behavior exhibited per session. The behaviors were:

1) Walking to the therapy room appropriately upon request (not running down the hall, asking to be carried or running outside).

2) Returning from the therapy room to the classroom upon request.

3) Reacting positively to and participating in the stated activity of the day.

4) Performing consistent positive cooperative behavior during the 30 minute session.
(no inappropriate aggressive behavior, yelling or destructive behavior).

The project was presented to the subjects as a game, using a 36" by 48" chart displaying each of their names. A maximum of four stars could be received per 30 minute session. A candybar was received after the accumulation of six stars. The subject receiving the most stars after the first eight sessions was awarded a toy truck. Stars were presented at the beginning of each session for behavior number two of the previous session and behavior number one of the current session. At the end of each session stars were given for behaviors three and four of the current session and candybars for those with six accumulated stars. Each star and candybar was accompanied with verbal praise. A time-out procedure was used by removing the subject from the room anytime his behavior became detrimentally disruptive to the task of the day.

Three follow-up sessions were scheduled for four, six and eight weeks after the termination of the BMP. The first follow-up session was run identically to the BMP sessions. During the second follow-up session the chart was present, although no reference was made to it. At the end of the session only verbal praise was given. The third follow-up session was conducted without the chart. The teacher of three of the boys was asked to establish a BMP within her

classroom at the termination of the regular sessions.

RESULTS

Figure 1 illustrates the mean number of stars received per session per child, before the BMP, during the BMP and during the follow-up sessions. A significant difference was

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Insert Figure 1 about here

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demonstrated between the mean number of appropriate behaviors prior to the BMP ($\bar{X}$ = 0.8) and the mean for the BMP sessions ($\bar{X}$ = 2.7) ($t = 4.70$, $p < .005$). There was no significant difference between the BMP sessions and the follow-up sessions.

DISCUSSION

It is apparent from the data that the BMP was effective in readying the children for a group therapy experience. By the end of the BMP sessions, the children were playing cooperatively with one another and were willing to sit quietly and listen to each other speak.

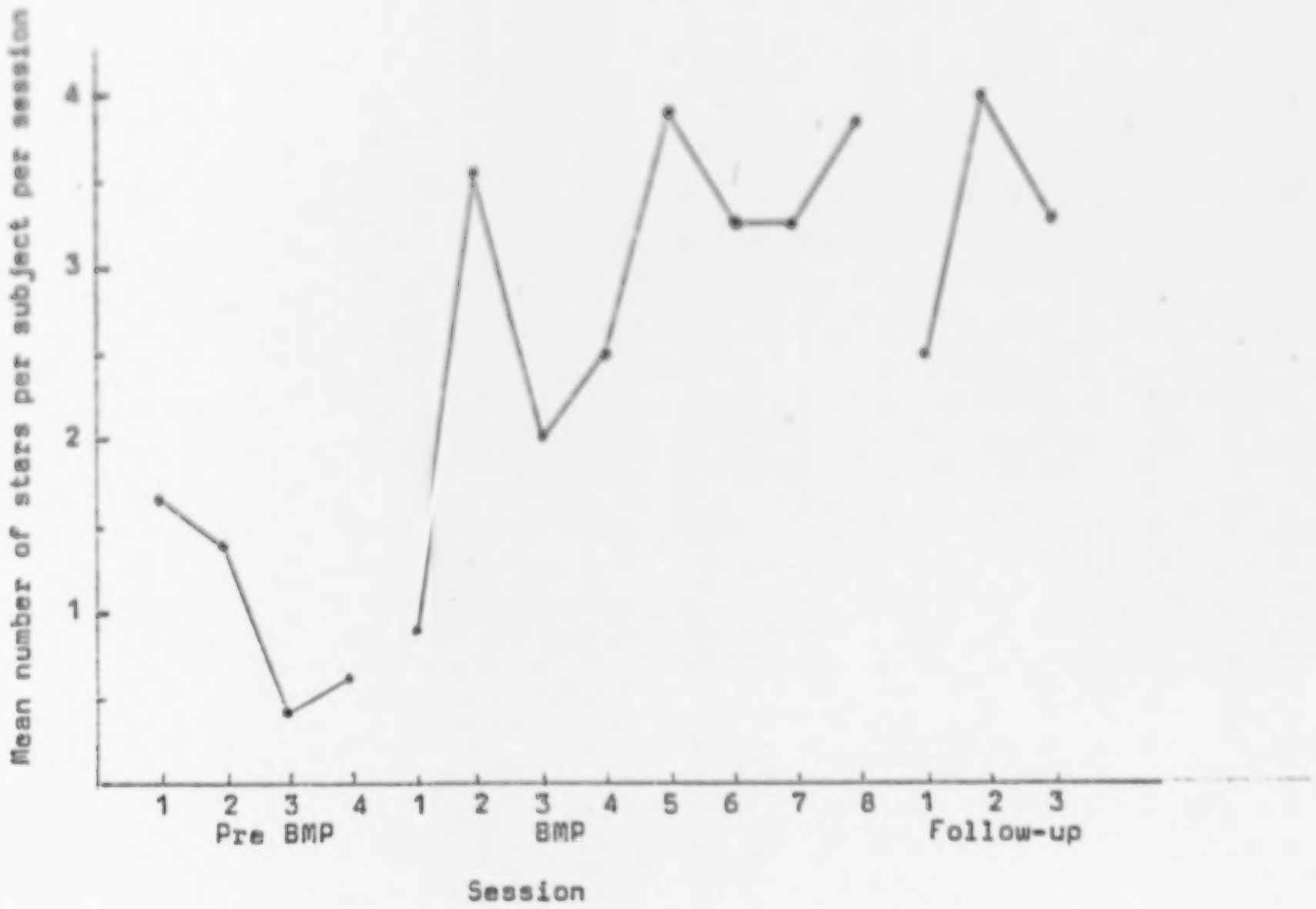
One of the most prevalent difficulties with BMPs is the rapid extinction of the conditioned behaviors after the removal of the therapist and/or primary reinforcers. That particular problem was overcome in this study through a unique combination of factors. The children were conditioned with immediate gratification (stars), short range delayed gratification (candybars), and long range delayed gratification (toys). The primary reinforcers were gradually

replaced with secondary reinforcers (verbal praise), whose effects had not extinguished up to eight weeks after the termination of the BMP. Most important, a cooperative teacher was willing to continue a semblance of the program in her classroom after the termination of the BMP.

An interesting sidelight occurred when two children that had exhibited the greatest amount of hording behavior, began to share their playthings with other members of the group. Although generosity was not specifically reinforced, it developed in two subjects as their means of being cooperative.

Behavior modification as a group therapy readiness technique with retarded boys was demonstrated as an effective means of preparing retardates for group therapy. Success was largely due to diversified reinforcement schedules and cooperation of teachers. This cooperation enabled continuation of the program outside of the therapy setting, facilitating generalization of the desired behaviors.

Figure 1


Mean number of stereotypies per subject per session
4
3
2
1
1 2 3 4 1 2 3 4 5 6 7 8 1 2 3
Pre BMP
BMP
Follow-up
Session

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